ABSTRACT

A transport facility adapted to transport TDM bit streams using IP packets over an asynchronous Ethernet network. TDM bit streams such as E1, T1, E3, T3, OC-3, OC-12, STM-1, STM-4, etc. are received, buffered and encapsulated into Ethernet frames. The Circuit Emulation Device (CED) receives, buffers and assembles in real-time ingress data from TDM ports into Ethernet frames and forwards them to an Ethernet interface. The TDM data is encapsulated within RTP, UDP and IP packets before being encapsulated within an Ethernet frame. In the egress direction, Ethernet frames enter the encapsulation/segmentation processor from the Ethernet port and the IP, UDP and RTP packets are extracted from the frame. TDM data is extracted and the bit streams are re-generated and forwarded to the TDM ports for transmission over legacy TDM facilities.